


EVALUATION STATEMENT

Labor Category/FLSA: Non-exempt

☒ **Current Position Description**
☐ **Proposed Position Description**

Date Prepared: July 7, 2003

Approving Official: Name: Charlene Watson Signature: 

Position Title/Series/Grade: Electrician WG-2805-11

**ORGANIZATION: Division of Intramural Research: Intramural Administrative Management
Branch, Administrative and Facilities Management Section**

REFERENCES: OPM JGS for Electrician WG-2805

Background: This position is in the Intramural Administrative Management Branch, Administrative and Facilities Management Section, Rocky Mountain Laboratories.

It is an established position and meets the requirements for Electrician WG-2805-11. An addendum has been added but it has no effect on the grade level.

I. Introduction

This is the only electrician position at Rocky Mountain Laboratory. Incumbent is solely responsible for the technical repair and maintenance of the entire electrical system and equipment. Assists with technical electrical advice in the fabrication, assembly, operation, and maintenance of sophisticated, scientific electronic equipment. This requires a basic knowledge of electronics.

II. Major Duties and Responsibilities

- A. On the basis of sketches, blueprints, wiring diagrams and instructions from the shop foreman, installs and tests outlets, connections, wires, cables, switches, transformers, chargers and such other electrical devices as are being constructed. After fabrication by other shop men, assembles parts for such apparatus as thermostats, transformers, electric motors, electrical controls, etc., and tests same for operational requirements.
- B. Works with the Head, Maintenance Unit, in planning electric assemblies or systems by advising him of the electrical properties of various electric circuits, etc., and ways to install such equipment and systems to maintain proper voltages and electrical balance. (The equipment and apparatus for which these assemblies and systems are developed are usually new types of equipment or standard equipment adapted to meet special laboratory uses). Changes and adapts standard electric equipment and procedures to meet special laboratory needs. Examples: humidity controls, thermostatic controls for cold rooms, air conditioning, incubators, special time and intensity lights, and alarm and indicating devices.
- C. Trouble shoots and repairs malfunctioning electrical systems of all kinds. Makes scheduled maintenance inspections and services all electronic systems. In the inspection and maintenance is charged with the safety aspect of all electrical systems, seeing that all completed electrical work at Rocky Mountain Laboratory, including contract work, is in accordance with applicable electrical codes and in safe operating condition.
- D. Assembles and installs electrical equipment and systems when new construction or repair projects are undertaken by the shop. Inspects and tests for workmanship and for conformity with prescribed plans, blueprints, and wiring diagrams, and reports to the Head, Maintenance Unit.
- E. Draws plans of electrical equipment and assemblies for use in constructing new laboratory equipment and for use in repairing, maintaining, and remodeling station equipment. Is responsible for the proper operation of electronic equipment such as electronically operated doors, pH meters, heating control panels, electrical controls, etc.

F. Is in charge of recording equipment in all laboratories and electrical servicing of all recording and indicating instruments used in the heating plant and incinerator. This includes meters for recording steam used, water used, boiler pressure, smoke indicator, humidity, temperature, speed of conveyors, etc.

G. Is responsible for the electrical repair, maintenance and installation of all station equipment. EXAMPLES:

Elevators - evaluate problems that arise and make decision to repair or call contract repairman. Minor repairs such as the following are completed by incumbent: 1) trouble shoots problems, 2) replace fuses, 3) clean electrical contacts, 4) change coils, light bulbs, 5) check volts and amps with stationary meter.

Paging system - located in all station buildings. Incumbent tests tubes, relocates speakers, tests and changes transformers, adjusts and balances volume of individual speakers.

Cold rooms and incubator temperature and humidity control instruments - tests and repairs alarm system on schedule, tests thermostats and temperature control units.

Testing control panels - circuits located in heating plant, incinerator, and emergency supply unit. Changes contact points and magnetic coils, calibrates recording instruments.

Electric panels - located in all buildings. Tests breakers on schedule.

Refrigeration control panels - located in heating plant. Performs scheduled testing and maintenance.

Miscellaneous motors, ovens, incubators, lights and power.

H. Inspects and services all air conditioning units, walk-in cold rooms, and standard refrigerators. Assigned minor refrigeration repair work as time allows.

I. Commonly uses the following instruments in daily work:

1. Oscilloscope
2. Multimeters and all size volt, amp, and ohm meters in either AC or DC
3. Pyroelectric meters
4. Thermo-anamometer
5. Electric psychrometer
6. Amprobe
7. Light meters and short wave UV meter
8. Vacuum tube tester

J. Performs other duties as required.

III. SUPERVISION AND GUIDANCE RECEIVED

Work assignment and evaluation are received from the supervisory Engineering Technician. However, incumbent works without technical supervision.

IV. OTHER SIGNIFICANT FACTS

Working Conditions: Work is primarily inside heated buildings, but on numerous occasions works outside in all extremes of weather. Subject to the hazards of electrical shock, burns, cuts and bruises and falls when working on ladders.

Physical Demands: Works for long periods in stooping, kneeling and lying positions and on ladders with hands overhead while making electrical installations and repairs. Some heavy lifting and arduous physical effort involved.

Other - Must be able to work with and assist other tradesman in the Maintenance Section. Must possess ability to communicate with others to accommodate modifications in equipment and structures to best suit the needs of the Scientific Community at Rocky Mountain Labs. Must be able to learn basic computer operation skills for record keeping purposes and to place orders for materials and services.

ADDENDUM TO ELECTRICIAN WG-2805-11

In addition to the duties outlined in the standard Electrician position description, the following will be required:

DUTIES AND RESPONSIBILITIES:

1. Troubleshooting, repairing and maintenance of electrical, electronic and mechanical components of emergency diesel generators;
2. Installation, troubleshooting, repair and maintain emergency power generation systems and equipment (i.e. alarm panels, ground fault detectors of AC and DC circuits and control panels, local and remote control operation of power generation equipment).
3. Use of computer system to troubleshoot and program Cummins Onan generator controls and automatic transfer switch controls.
4. Operation of automatic and manual transfer switches electrically and manually.
5. Troubleshooting and repair of electrical, electronic and mechanical components of automatic and manual transfer switches.

KNOWLEDGE REQUIRED:

1. Expertise in paralleling generators, load sharing and load shedding.
2. Certification in medium voltage grounding from 601 to 15,000 volts.
3. Knowledge of electronic, alarm panels, electrical circuits, control panels, transfer switches, power distribution panels, and feeders.